REMARKS

Claims 1-37 are currently pending. Claim 38 has been withdrawn. Claims 5, 8, 10-15, 26, 29, and 31 have been amended to correct the spelling of certain words to conform with the English language. No new matter has been added.

Applicants amended the Sequence Listing correcting the errors noted by the reviewer in the error report and submit concurrently herewith both a paper copy and new CRF.

The rejection of claims 1-4, 14-31, 33, and 35-37 under 35 U.S.C. §103(a) over Gitan et al (Genome Research, 2001, 12, 158-164) in view of Bransteitter et al (PNAS, 2003, 100, 4102-4107) is respectfully traversed.

Gitan et al discloses a method known as methylation specific oligonucleotide microarray. This method uses bisulphate-modified DNA as a template for PCR amplification. Bisulphite-modification results in conversion of unmethylated cytosine but not methylated cytosine into thymine within CpG islands of interest in the PCR product (see abstract). There is no disclosure in Gitan et al of the use of an enzyme which differentially modifies methylated cytosine and unmethylated cytosine in single stranded DNA.

The deficiency of Gitan is not cured by Bransteitter. Bransteitter is broadly directed to an enzyme treatment to differentially modulate DNA comprising methylated and unmethylated cytosine. Bransteitter does not disclose measuring the presence or level of alkylated cytosine in a DNA sample. As such, one of skill in the art would not combine Gitan and Bransteitter and have a reasonable expectation of successfully practicing the claimed invention. Furthermore, the Office Action fails to meet its burden in making a prima facie case of obviousness. The Office bears the initial burden of factually supporting any prima facie conclusion of obviousness. The Federal Circuit has clearly stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." In re Kahn, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). Conclusory statements that both references would be

combined because they are both "interested in understanding the importance of methylation pattern in biological processes..." and "one having skill in the art would like to use an enzyme.." do not suffice as "articulated reasoning." As such, Applicant respectfully requests withdrawal of this rejection.

The rejection of claims 1 and 4-13 under 35 U.S.C. §103(a) over Gitan et al. (Genome Research, 2001, 12, 158-164) in view of Bransteitter et al (PNAS, 2003, 100, 4102-4107) and further in view of Kuhn et al (J. Am. Chem. Soc., 2002, 124, 1097-1103) is respectfully traversed.

The combination of Gitan and Bransteitter is addressed above. The addition of Kuhn et al does not cure the deficiencies of the combination of Gitan and Bransteitter. Kuhn et al provides information regarding separating two strands of double stranded DNA with different means including strand displacing probes. Kuhn et al does not, however, provide any teaching or information regarding differentially modifying alkylated cytosine and cytosine present in single stranded DNA. Accordingly, even if the skilled artisan was to combine the references, as suggested in the Office Action, they would not arrive at the current invention. As such, the combined references do not render the claimed invention obvious. Thus, Applicant respectfully requests withdrawal of this rejection.

The rejection of claims 1 and 32 under 35 U.S.C. §103(a) over Gitan et al (Genome Research, 2001, 12, 158-164) in view of Bransteitter et al (PNAS, 2003, 100, 4102-4107) and further in view of Opdecamp et al. (Nucleic Acids Research, 1992, 20, 171-178) is respectfully traversed.

The combination of Gitan and Bransteitter is addressed above. The addition of Opedecamp et al does not cure the deficiencies of the combination of Gitan and Bransteitter. Opdecamp et al teaches identification of methylated DNA by using methylation-sensitive restriction enzymes. In the claimed method the enzyme is acting on single stranded DNA. It is well understood that restriction enzymes only recognize and cleave double stranded DNA. Accordingly, none of the enzymes referred to in Opdecamp differentially modify cytosine and

alkylated cytosine in the single stranded DNA. Reconsideration and withdrawal of this rejection is respectfully requested.

The rejection of claims 1 and 34 under 35 U.S.C. §103(a) over Gitan et al (Genome Research, 2001, 12, 158-164) in view of Bransteitter et al (PNAS, 2003, 100, 4102-4107) and further in view of Paulson et al. (J. Virol., 1999, 73, 9959-9968) is respectfully traversed.

The combination of Gitan and Bransteitter is addressed above. The addition of Paulson et al does not cure the deficiencies of the combination of Gitan and Bransteitter. Paulson et al uses bisulphite modified DNA which is then amplified using PCR to detect sites of methylation in the viral genome. Accordingly, the methodology of Paulson et al is similar to the methodology of Gitan et al discussed above. There is no disclosure in Paulson et al for use of an enzyme which differentially modifies cytosine present in single stranded DNA.

Reconsideration and withdrawal of this rejection is respectfully requested.

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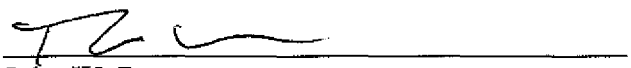
Respectfully submitted,

Date: 18 June 09



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